



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,730	02/05/2001	Frederic Gabin	518-1014	8461

7590

09/16/2004

Lee Mann Smith McWilliams Sweeney & Ohlson
PO Box 2786
Chicago, IL 60690-2786

EXAMINER

GOSHTASBI, JAMSHID

ART UNIT	PAPER NUMBER
----------	--------------

2637

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,730

Applicant(s)

GABIN ET AL.

Examiner

Jamshid Goshtasbi-G.

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/05/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-7 are pending in the application.

Claim Objections

2. Claim 5 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim 5 is a multiple dependent claim that improperly depends on Claim 3 (itself, a multiple dependent claim).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5230003 to Dent et al.

As to **Claim 1**, Dent et al. discloses a receiver (decoding system; col. 1, lines 61-62) for receiving a digital packet (digital data signal; col. 1, lines 13-18) which has been subject to a transmission coding selected from a plurality of

Art Unit: 2637

available codes (different types of communication traffic signals; col. 1, lines 61-64), comprising decoding means for decoding the received packet according to the transmission coding (col. 2, lines 4-5), which belongs to a reduced set of possible codes, for each of which a decoder (col. 1, lines 64-67) receives a portion of the transmitted packet (only a fraction of bits in the signal; col. 6, lines 46-49) so as to determine an associated decoding reliability (a quantitative measurement of the reliability; col. 1 line 67 to col. 2, line 1), and which also includes means for identifying the decoding means as those which correspond to the decoder that has produced the best (greatest) reliability (col. 2, lines 1-5).

Claim 5 inherits the limitations of either claim 1 – 4 (rejected in this Office Action); further, Dent et al. anticipates the use of convolutional coding, each assigned a different coding pattern (different types of convolutionally-encoded signals; col. 1, lines 8-11).

Claim 6 inherits the limitations of Claim 5; further, Dent et al. anticipates the use of different coding rates (the decoder 40 operates with the rate $1/4$, the decoder 42 operates the rate $1/2$; col. 5, lines 57-62).

5. Claims 2, 3, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4701923 to Fukasawa et al.

As to **Claim 2**, Fukasawa et al. discloses transmission equipment (transmitting side) for transmitting a sequence of encoded messages by means of packets (a plurality of frames into a block by the encoder to provide encoded data; col. 3, lines 28-56), the last message of this sequence being subject to a

Art Unit: 2637

coding identified in a series of available codings (correcting codes E1-E4; col. 4, line 65 to col. 5, line 14) and which differs from the coding applied to the first message of the sequence (use of the error correcting E2; the state of the encoding system for error correction changes to a state with the error correcting code E3; 65 to col. 5, line 14), where the coding applied to the last message belongs to a reduced series of possible coding (four available codes E1-E4; the transition diagram does not allow more than three codes for a given packet depending the code of the preceding packet; Fig. 3 and col. 4, line 64 – col. 5, line 14); further, the fact that the packets contain both a useful section for receiving data and also guard bits, and that the equipment includes means for arranging each of the encoded messages in the entire useful section of the corresponding packet, is well known in the art; further, packets with a payload and guard bits are used in the majority of protocols on the data transmission layer, whereas the use of means for arranging the encoded messages in the entire useful section of the packet is one of the consequences of encapsulating the various protocol layers; further, Fukasawa et al., although not explicitly mentioned therein, anticipates these features in the transmission equipment disclosed (col. 1, lines 57-63; col. 1, line 64 to col. 2, line 2).

Claim 3 inherits the limitations of either Claim 1 or Claim 2 rejected above; further, Fukasawa et al. anticipates the use of a predetermined coding for the first packet (E1 is used in initial setting for encoding; col. 3, lines 48-51).

Claim 4 inherits the limitations of Claim 3; further, Fukasawa et al. anticipates the restriction of the transmission codings to a group of possible

Art Unit: 2637

codings, so as to order the codings in relation to each other (possible transitions from one code to the other; Fig. 3; the possible codes from E2 are E2, E1 or E3, but not E4; col. 4, line 65 to col. 5, line 14).

Claim Rejections – 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dent et al. (US 5230003).

Claim 7, inherits all the limitations of Claim 6; further, it is known in the art that if only three codings, differing in terms of their respective coding rates, are possible, the use of two coding rates for the decoder follows. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate this feature into the method of Dent et al. for producing the claimed invention because using only two decoders reduces the complexity of the system.

Conclusions

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gardner et al. [US 5729557] discloses using three

Art Unit: 2637

different code rates ($2/3$, $1/2$, and $1/3$) convolutional codes; De Bart et al. [US 6088828] discloses the use of a reliability measure for the decoded digital symbols and comparing it with a predetermined threshold to determine the coding rate used in coding of the received digital symbols; Dent et al. [US 6044485] discloses the use of two convolutional codes for coding of digital data based on the characteristics of the channel; and, Martinez et al. [US 6009553] discloses dynamically adapting a coding rate as function of a measured reverse channel signal.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamshid Goshtasbi-G. whose telephone number is (571) 272-3012. The examiner can normally be reached on M-F 8:00/4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

Art Unit: 2637

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jamshid Goshtasbi-G.
Examiner
Art Unit 2637


KHAI TRAN
PRIMARY EXAMINER